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supplying the first jet of fluorine-based gases to the silica soot deposited onto the bait rod via the first gas-feed subsequent to vaporizing at least a portion of the silica producing gas within the reactant flame of the burner.

Remarks

In view of the above amendments and the following remarks, favorable reconsideration of the outstanding office action is respectfully requested.

Attached hereto is a page entitled "Version of Markings to Show Changes Made."

Claims 1-13 remain in this application. Claim 1 has been amended. Claims 14-21 have previously been withdrawn from consideration, without prejudice.

1. § 103 Rejections

The Examiner has rejected claims 1-2 and 7-13 under 35 U.S.C. § 103 as being unpatentable for obviousness over Japanese Patent No. 406122527 (and its abstract) taken alone or with U.S. Patent 4,221,825 to Guerder et al.

JP 406122527 to Ito et al. teaches a VAD (Vapor Axial Deposition) method wherein a first burner 1 is supplied with O₂, H₂, SiCl₄ and GeCl₄ to form the core, a second burner 2 is supplied with O₂, H₂, and SiCl₄ to form the clad, and an auxiliary burner 15 (between burners 1 and 2) is supplied with O₂, H₂, and CF₄ to provide F doping of a preform free from spreading at the skirt part.

Guerder et al (US 4,221,825) teach a plasma VAD method wherein one nozzle 26 delivers a silica-containing precursor compound (such as SiCl₄) while the other nozzle 24 delivers a fluorine gas to the plasma flame 22 generated from a plasma burner. Optionally, the fluorine-containing gas (NF₃ or SF₆) may be delivered to the nozzle 26 as a mixture with the SiCl₄.


Neither Ito et al '527 nor Guerder et al '825, alone or in combination, teach or suggest the claimed invention, as amended. First, both Ito and Guerder teach a VAD method. In such a method there is no bait rod (conventionally described as a rod onto which soot is radially deposited along its length). In Ito, there is a starting rod, but the deposition takes place on the *axial end* thereof as opposed to the radial surface of the bait rod in the present OVD invention. Further, in Guerder, the fluorine-gas and the silica-producing gas are introduced into the plasma flame at the same time. As such, the jet of fluorine-based gases is not supplied to the silica soot deposited onto the bait rod ... subsequent to vaporizing at least a portion of the silica producing gas, as required in the claim. In fact, in Guerder, the

Please direct any questions or comments to Randall S. Wayland at 607-974-0463.

Respectfully submitted,

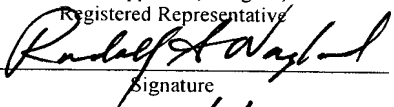
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VERSION OF MARKINGS TO SHOW CHANGES MADE

(Amended) 1. A method for doping silica soot with fluorine during laydown, comprising the steps of:

providing a bait rod;

providing a burner, the burner emitting a reactant flame;

providing at least one first gas-feed separated from the burner, the gas-feed being in fluid communication with a source for supplying a first jet of fluorine based gases from the source;

depositing on a radial surface of the bait rod a layer of silica soot on the bait rod by vaporizing a silica producing gas emitted from the burner within the reactant flame of the burner; and

supplying the first jet of fluorine-based gases to the silica soot deposited onto the bait rod via the first gas-feed subsequent to vaporizing at least a portion of the silica producing gas within the reactant flame of the burner.



THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor: Lehman, et al.)
Serial No: 10/033,144) Art Group Unit: 1731
Filing Date: 10/26/2001) Examiner: J. Derrington
Title: AN APPARATUS AND METHOD)
OF DOPING SILICA WITH)
FLUORINE DURING LAYDOWN)

Assistant Commissioner of Patents
Washington, D.C. 20231

REQUEST FOR EXTENSION OF TIME TO RESPOND TO OFFICIAL ACTION

Applicants, through counsel, respectfully request a two (2) month extension of time pursuant to 37 C.F.R. § 1.136(a), or such other extension of time as is necessary, to respond to the Office Action dated October 1, 2002, currently due. Please charge the fee of \$410.00, and any additional fees or surcharges necessary to make this response timely, to the deposit account of the undersigned corporation, Deposit Account No. 03-3325, and credit any overpayment.

Respectfully submitted,

Date: 3/3/03

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01 FC:1252 410.00 CH

CERTIFICATE OF MAILING UNDER 37 C.F.R. § 1.8: I hereby certify that this paper and any papers referred to herein are being deposited with the U.S. Postal Service, as first class mail, postage prepaid, addressed to the Assistant Commissioner of Patents, Washington, D.C. 20231 on 3/3/03

Randall S. Wayland
Randall S. Wayland(Signature)

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